

WHAT IS CLAIMED IS:

37. (Original) A temperature controlled fluorescent lamp comprising one or more zinc amalgam pellets sealed within the light emitting chamber thereof.

38. (Original) The lamp of Claim 37 wherein at least one of said pellets comprises greater than 45 weight percent mercury.

39. (Original) The lamp of Claim 37 wherein at least one of said pellets is in a metastable, non-equilibrium state.

40. (Original) The lamp of Claim 37 wherein the amalgam of at least one of said pellets is binary.

41. (Original) The lamp of Claim 37 wherein at least one of said pellets is formed by rapid solidification of molten zinc amalgam.

42. (Original) A fluorescent lamp having one or more amalgam pellets sealed within the light emitting chamber thereof wherein at least one of the amalgam pellets is formed by rapid solidification of molten amalgam.

43. (Original) The lamp of Claim 42 wherein the amalgam is zinc amalgam.

44. (Original) The lamp of Claim 43 wherein the amalgam comprises greater than 45 weight percent mercury.

45. (Original) A fluorescent lamp having an amalgam sealed therein wherein the amalgam comprises more than 45 weight percent mercury and has a vapor pressure which is not significantly different than the vapor pressure of pure mercury.

46. (Original) The lamp of Claim 45 wherein the amalgam is zinc amalgam.

47. (Original) The lamp of Claim 45 wherein the amalgam form one or more pellets.

48. (Original) A temperature controlled lamp having a predetermined amount of mercury sealed therein in the form of a zinc amalgam comprising greater than 45 weight percent mercury wherein the amalgam is partially in the liquid and partially in the solid phase when the lamp is operating.

49. (Original) The lamp of Claim 48 wherein the amalgam forms one or more pellets.

50. (Original) A lamp fill material for a fluorescent lamp comprising a zinc amalgam forming one or more pellets having more than 45 weight percent but not more than 60 weight percent mercury.

51. (Original) The fill material of Claim 50 wherein at about 20 degrees C said pellets comprise an interior with mercury-rich liquid portions.

52. (Original) The fill material of Claim 51 wherein said pellets comprise a shell having zinc-rich portions.

53. (Original) The fill material of Claim 52 wherein said pellets are porous so that mercury vapor diffuses from the interior of said pellets.

54. (New) The lamp of Claim 37 wherein said one or more zinc amalgam pellets comprises more than 45 weight percent but not more than 60 weight percent mercury.